ABSTRACT

The invention provides methods and a reactor for safely destroying containers having toxic chemical and biological materials contained therein. The reactor comprises a pressure vessel having an internal reaction chamber and at least one heater disposed on an exterior of the pressure vessel. A fragment-suppression system is also disposed within the internal reaction chamber. The fragment-suppression system is adapted to receive a container therein, such as an energetic chemical munition, and is adapted to receive a charge for opening the container. An injection port is also provided so that oxidants can be injected into said reaction chamber to neutralize the chemical and biological materials after the container has been opened.